INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY	Czechoslovakia	REPORT	
SUBJECT	Organization, Operation and Production of the Spolek Chemical Combine in Usti nad Labem	DATE DISTR.	JUL 1959
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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

sketch of the layout of the plant in Usti nad Labem to which the legend in the report pertains.

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ARMY review completed.

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STATE	#X ARMY	#X NAVY	X AIR	#X FBI	AEC					

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ORGANIZATION, OPERATION, AND PRODUCTION OF THE SPOLEK CHEMICAL COMBINE IN ÚSTÍ NAD LABEM, CZECHOSLOVAKIA (C)

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ORGANIZATION, OPERATION, AND PRODUCTION OF THE SPOLEK CHEMICAL COMBINE IN ÚSTÍ NAD LABEM, CZECHOSLOVAKIA (C)

Introduction

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Throughout this report the term Spolek Chemical Combine refers to the Spolek Chemical Combine in ÚSTÍ NAD LABEM. 25X1

Listed below are the names and geographic and UTM coordinates of locations used throughout this report. Coordinates are not shown for well-known locations.

Location	Geographic	UTM
BOLETICE	N50-44, E14-12	VS-4322
CHABAROVICE	N50-41, E13-56	VQ-8464
DUCHCOV	N50-36, E13-45	VS-1306
HROB	N50-40, E13-43	VS-0913
HRUŠOV	N49-52, E18-18	CA-0527
KRALUPY	N50-14, E14-19	VR-5166
MNÍŠEK	N50-38, E13-30	WS-0332
NERATOVICE	N50-16, E14-31	VR-6668
NESTĚMICE	N50-40, E14-06	VS-3614
NOVAKY	N48-43, E18-33	CU-2000
PŘEROV	N49-27, E17-27	XQ-7781
RETENICE	N50-38, E13-49	VS-1511
ROUDNICE	N50-25, E14-15	VR-4786
RYBITVÍ	N50-03, E15-42	WR-5045
SOKOLOV	N50-11, E12-38	UR-3261
STŘEKOV	N50-39, E14-04	VS-3311
TRMICE	N50-39, E14-00	VS-2911
TURNOV	N50-35, E15-10	WS-1203
VELVĚTY	N50-36, E13-53	VS-2808

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1. History of Spolek Chemical Combine

From 1936 until 1938, Spolek was a private corporation and was controlled by the Bank of Commerce (Živnostenská Banka) in PRAGUE, which owned 51 percent of the stock. At this time, Spolek consisted of several chemical plants in Czechoslovakia and foreign countries.

During World War II, the Usti Nad Labem plant came under German control and was later purchased by the Dresdner Bank and the IG Farben Industries for three million crowns. This plant and a chemical plant at FALKENAU (former German name, now called SOKOLOV) were incorporated and named Chemische Werke Aussig-Falkenau (Chemical Works Usti-Falknov). The Germans later separated the organic chemistry department from the Usti Nad Labem plant and made it into a separate unit called Farbenwerke-Aassig (Usti Dye Works). After the war, the plant reverted to its original owner and the Usti Nad Labem plant was incorporated with chemical plants at SOKOLOV, NERATOVICE, RYBITVÍ, HRUŠOV, ŽILINA, and NOVAKY.

In 1948, the plant became the property of the State, and was renamed Spolek pro Chemickou a Hutni Vyrobu (Association for Chemical and Metallurgical Products). In about 1950 the association was broken up and each plant was given its own directorship, but was still controlled by the Ministry of Chemical Industry in PRAGUE. At this time, all the chemical plants were renamed. The plant at ÚSTÍ NAD LABEM was named Spolek pro Chemickou a Hutni Vyrobu; the Sokolov plant became Východo-České Chemické Závody (East Bohemian Chemical Plants); the Hrusov plant became Závod Dukla (named after the Dukla mountain pass through which the Soviet Army entered Czechoslovakia during the closing days of World War II); the Zilina plant became Považské Chemické Závody (named for its location on the Vah River); and the Novaky plant became Závody Wilhelma Piecka (Wilhelm Pieck Plant).

after the 1958 reorganization of the Czechoslovak chemical industry, the names of some of the plants were to be changed again. For example, the Hrusov plant would incorporate several nearby smaller plants and would be renamed Moravské Chemické Závody (Moravian Chemical Works). the plants at ÚSTÍ NAD LABEM, NERATOVICE, and RYBITVÍ would retain their present names.

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2. The 1958 Reorganization of the Czechoslovak Chemical Industry

the chemical industry would be reorganized in 1958. On 1 January 1958, the reorganization began.

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According to official directives, the purpose of the reorganization was to increase efficiency and lower costs of production in the chemical industry by centralizing plant management, which would in turn reduce the number of white-collar workers and technicians in the industry. As an example of this, about 40 technicians and about 60 white-collar workers were dismissed from small plants which were placed under the control of the Spolek Chemical Combine at ÚSTÍ NAD LABEM. The reorganization was to place the control and direction of small chemical plants under larger plants within the same industrial areas.

The reorganization of the Spolek Chemical Combine plant at ÚSTÍ NAD LABEM took four or five months. the reorganization of plants in Moravia and Slovakia had not yet been completed.

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As a result of the reorganization, the Spolek Chemical Combine plant at USTI NAD LABEM received control and directorship of the following chemical plants:

Chemical Plant at NEŠTĚMICE - This plant produced soda ash as its main product, but it also produced chromates, detergents, soaps, calcium carbonates, calcium chloride, and caustic soda.

Chemical Plant at RETENICE - This plant's only product was aluminum sulfate.

Chemical Plant at ROUDNICE - This plant produced frits used in the porcelain industry.

Chemical Plant at BOLETICE - This plant produced detergents, emulsifiers, wetting agents and other materials used in the textile industry.

Chemical Plant at MNIŠEK - This plant produced the same products as the chemical plant at BOLETICE.

Chemical Plant at VELVĚTY - [redacted] 25X1 During World War II, it produced explosives used in aerial bombs. In 1948, it came under control of the Ministry of National Defense. [redacted] Spolek Chemical Combine planned to construct a new plant here for the production of dyes and intermediates.

Chemical Plant at DUCHCOV - This plant produced wood stains.

Chemical Plant at CHABAŘOVICE - This plant produced "Ultramarine" pigments used for laundry bluing, for dyeing blue wrapping paper, and for mixing with whitewash.

All of the plants in the Spolek Chemical Combine were given the Spolek Chemical Combine name plus the name of their location. For example, the plant at BOLETICE was called Spolek pro Chemickou a Hutni Vyrobu-Zavod Boletice (Association for Chemical and Metallurgical Products - Boletice Plant).

3. Organization of the Spolek Chemical Combine Plant at ÚSTÍ NAD LABEM (See Annex A)

a. Director

The director was appointed by the Ministry of Chemical Industry and was directly responsible to the ministry for all production, administration, and personnel matters and plans of the Spolek Chemical Combine plant, as well as of the pilot plants.

His office, which was located in the plant administration building, was staffed by one male secretary and two steno-typists. His monthly income, including all allowances and bonuses, averaged about 5000 crowns.

Stanislav RAZL was the director at the time [redacted] 25X1 RAZL became director in 1956. Before 1948, he had been a clerk in the Work and Wages Department of the Usti Nad Labem plant. In 1948, he was sent to the Ministry of Chemical Industry and rapidly advanced. [redacted] 25X1

[redacted] 25X1

The plant director from 1949 to 1956 was Frantisek ZUREK. In 1956, he was transferred to the Projects Department of a new synthetic rubber factory in KRALUPY.

b. Production Department (See Annex B)

(1) Chief Engineer

The chief engineer was the first deputy of the director and consequently the second-ranking person in the Spolek Chemical Combine. He was head of the Production Department and, as such, was in charge of plans, safety, research and development for the Spolek Chemical Combine. His office was in the plant administration building and was staffed by a female chemical engineer, Kveta JILIKOVA, who had studied in the USSR, and a female stenographer. [redacted] 25X1

[redacted]

The chief engineer at the time [redacted] was Zdenek KUBEK. [redacted] he was appointed to the position by the Ministry of Chemical Industry. Before 1955, he had been employed at the Ostrava Nitrogen Plant (Dusikarny Ostrava) as a chemical engineer. 25X1

(2) Chief Coordinator (Hlavní Dispečer)

The chief coordinator was Engineer Karel KALNY. His office was located in the plant administration building and was staffed by one female secretary. Subordinate to him were three (possibly four) coordinators, who worked on shifts and represented the chief coordinator during his absence. The duties of the chief coordinator included: relieving the chief engineer of minor production problems; reporting all accidents or unusual occurrences and production figures to the chief engineer for the preceding day (or shift); insuring that production plans were fulfilled, maintaining daily production graphs showing the current production figures; and meeting daily at a predetermined time with the chief engineer for a telephone conference with the Production Department head, the chief mechanic, the head of the Power Department, and the head of the Administrative Department in order to discuss plans, bottlenecks, and procedures. This conference was conducted by means of a special telephone network. The participants each had a special telephone which enabled them to listen and speak as if they were all gathered around a conference table. This was considered to be a time-saving innovation which enabled the participants to take part in the conference without the necessity of leaving their offices. [redacted] this system was being adopted in all factories throughout Czechoslovakia. 25X1

The chief coordinators also coordinated activities between the individual plants, the Production Department, and other departments within the Spolek Chemical Combine.

The coordinator's office was also used as a central ambulance dispatching office. In case of an accident in any of the plants, the coordinator's office would be notified and would in turn telephone the plant ambulance service or the doctor.

This system of the coordinator acting as a buffer for the chief engineer was not a proven system. Most of the coordinators were inexperienced and not fully qualified. They were often unable to cope with minor problems and were forced to consult the chief engineer. This increased the work load of the chief engineer. The system was, however, improving with time and experience.

(a) Production Sections (Vyrobni cechy)

The following production sections were subordinate to the chief engineer:

Electrolysis Section (Elektrolysa Cech)
Sulfuric Acid Section (Kyselina Sorova Cech)
Cryolite Section (Kryolite Cech)
Trichloroethylene Section (Trichlor Cech)
Synthetic Resins Section (Umele Pryskyrice Cech)
Tar Dyes Section (Dehtova Barviva Cech)

Each of the above sections had integral planning, economic, maintenance, production and, according to local needs, research and development sub-sections. (See Annex C.)

The chief of each production section was responsible for fulfillment of production quotas, safety of his employees, and the hiring and discharging of employees, in conjunction with the ROH and the plant organization of the Communist Party. He worked in close coordination with the Planning Department and the chief mechanic.

1. Electrolysis Section

This section was headed by Chief Engineer SVEV, (fnu) and a deputy, Engineer DLOUHY, (fnu). A female steno-typist was employed in their office. At least 19 individual production plants and units were under the supervision of the chief. These plants were as follows:

Salt Brine Plant
Caustic Soda, Plant Nr. 1
Caustic Soda, Plant Nr. 2
Caustic Alkali Plant (There may have been two plants producing caustic alkali).
Liquid Chlorine Plant
Permanganate Plant Nr. 1
Permanganate Plant Nr. 2
Permanganate and Manganese Dioxide Plant
Potash Plant
Maintenance Sub-Section
Bleaches (Sodium Hypochloride) Plant
Bleaching Powders (Calcium Hypochloride) Plant
Calcium Chloride Plant
Zinc and Magnesium Chloride Plant
Solid Caustics Plant (solid sodium hydroxide and solid potassium hydroxide in chemically pure form, i.e. reagent grades)
Laboratory
Hydrochloric Acid Plant
Salmiac (Ammonium Chloride) Plant
Anthraquinone Plant

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2. Sulfuric Acid Section

This section was headed by Kvido KILB. His office was located in a small building near the sulfuric acid plant and was staffed by a deputy (nu) and a female secretary. This section was responsible for the following production plants:

Sulfuric Acid Plant
Oleum Plant (Fuming Sulfuric Acid)
Chlorosulfonic Acid Plant
Sulfite Plant
Hyposulfite Plant
Trisodium Phosphate Plant
Superphosphate Plant
Sodium Fluorosilicate Plant
Synthetic Sapphires Plant
Tungstic Acid Plant (Produced commercially as WO_3 tungsten trioxide).
"Blanc Fix" Plant

3. Cryolite Section

This section was headed by Engineer MORSTADT, (fnu). His office was staffed with a deputy (nu) and a female secretary. The cryolite plant under this section was the only source of cryolite in Czechoslovakia. It was constructed here in about 1952 or 1953 with East German equipment and under the direction of East German technicians. The reason for its construction at ÚSTÍ NAD LABEM was that ÚSTÍ NAD LABEM had the only source of hydrofluoric acid in Czechoslovakia. This was the smallest section in the Spolek Chemical Combine, with only the following four subordinate plants:

Hydrofluoric Acid Plant
Aluminum Fluoride Plant
Cryolite Plant (Production began in 1954)
Freon Gas Plant (Production began in July 1958)

4. Trichloroethylene Section

The head of this section (since July or August 1958) was Engineer PROCHAZKA, (fnu). He was responsible for the following plants:

Trichloroethylene Plant. This plant also produced hexachloroethane and perchloroethylene. It was enlarged and production was doubled in 1958.

Xanthate Plant
DDT Plant. This plant also produced chloral.
Carbon Disulfide Plant
2,4-D Plant (a herbicide). It was planned to move production of 2,4-D to the DDT plant. The desire was to increase production of 2,4-D and decrease production of DDT.

Chloroacetic Acid Plant. This plant was only partially constructed and had only part of its equipment installed. Production was planned to begin about the middle of 1959.

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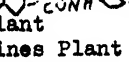
5. Synthetic Resins Section

The head of this section was Engineer BERCIK, (fnu). He was responsible for the following plants:

Resins Plant
Diphenylpropane Plant
Epichlorohydrin Plant
Solvents Plant. These solvents were methylcyclohexanole and methylcyclohexanone.
Nitrogen and Hydrogen Plant (This plant also produced ammonia).
Dicyclohexylammonium Nitrate (trade name - "Dicynit") Plant. This plant was under construction at the time of Source's defection. Production was due to begin during the first part of 1959.

6. Tar Dyes Section

This section was headed by Engineer Frantisek SMISEK. He was responsible for the following plants:

Beta-Naphthol Plant
Oxynaphthoic Plant
Naphthol A-S Dyes Plant (Also known under the trade name "Ultrazoly." The formula was  .)
Azo Dyes Plant
Soluble Amines Plant
Sulfur Dyes Plant
Alizarin Plant
"Ostan" Blue Plant
Dye Mixing Plant
Printing Inks Plant (This plant was actually used for the grinding of dyestuff pastes).
Dye Intermediates Plant

(b) Other Sections Within the Production Department

1. Incentive Awards Section (Zlepšovací Navrhy)

This section was staffed by two persons and was located in the plant administration building. Its sole function was to forward all incentive award forms to their final destination, i.e., either to the plant's utilization of the suggestion and payment to the originator or to the rejection of the suggestion by the Incentive Awards Committee.

Blank forms for incentive awards suggestions were distributed at strategic locations through the Spolek Chemical Combine. There were specific forms for technical, operational, or administrative suggestions. Largest payments were made for approved technical suggestions, with operational awards paying the second highest, and administrative suggestions the lowest.

The monetary award was paid according to an official chart (vladní nařízeni) which stated the exact amount to be paid in conjunction with the total amount saved per year from the suggestion. This award was paid in three installments. The first fourth of the total award was paid immediately upon approval and completion of necessary paperwork. The second fourth of the total amount was paid six months after the suggestion was first submitted. The final payment was made one year after the suggestion was submitted. The last

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payment could be increased or decreased, depending upon the amount of proved savings the suggestion had brought about.

The Incentive Awards Committee was composed of heads of various departments and sections, depending upon the type of suggestion submitted.

2. Plant Safety Section (Bezpečnost Prace)

This office was located in the plant administrative building and was staffed by three persons. The mission of this sub-section was to reduce accidents, insure that all employees complied with safety regulations, investigate causes of accidents and deaths, and distribute and post safety posters. This office also maintained and issued all protective clothing and equipment used by the Spolek Chemical Combine.

3. Meters and Gauges Section (Měřické)

This section repaired, maintained, and replaced all ordinary measuring instruments within the Spolek Chemical Combine. These instruments included all meters, gauges, pressure gauges, heat measuring devices, and similar instruments.

The section had its own building in addition to several rooms in an adjoining building. It also had a workshop containing lathes, drills, and precision instruments, and tools. [redacted] 40 to 50 persons were employed by this section, including watchmakers and precision mechanics. 25X1

4. Projects Section (Projekení)

This was a new section which was formed during the first part of 1958. Before that it was part of the Construction and Projects Section. About 30 persons were employed here. They were concerned with estimating costs of new projects, stating the type and amount of equipment and material needed and maintaining files of all plans and blueprints used by the Spolek Chemical Combine.

After plans for new projects were prepared in this section, they were sent forward for approval. If the project required only a small amount (exact amount unknown) of funds, it could be approved by the director of the Spolek Chemical Combine. Projects requi ing large amounts of money had to go to the Ministry of Chemical Industry for approval. The majority of plans prepared by this section was never approved. This was because most new projects originated within the production plants, and, after all plans had been made, it was found that they were not feasible or economically possible.

This section was similar to the Construction Section under the chief mechanic, except that the projects section made plans for long-range, future, possible projects, while the Construction Section was concerned with local, approved construction projects.

5. Research Section (Závodní Vyzkum)

Before the 1958 reorganization of the chemical industry, this section was known as the Technical Section. The office was located on the seventh floor of the plant administration building. The head of the section was Jaroslav MALEK. He was responsible for the introduction and technical development of new products and for aiding the chief engineer in technical matters.

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a. Inorganic Laboratories

These laboratories were located in a separate building. Although the building was old, it had been enlarged and modernized, and the laboratories and workshops had been outfitted with new equipment in 1958. The chief was Dr. Rudolf BURIAN; he had approximately 20 chemists and technicians working for him.

He was responsible for working out procedures and technologies on a laboratory scale for production of new inorganic products. He prepared reports of results and personally discussed the results with the chief engineer. He also assisted in the manufacture of new products in pilot plants.

The following are some projects under study in these laboratories during 1958:

The use of the "Hooker" cell in electrolysis. 25X1

a "Hooker" cell was being tested in a pilot plant. 25X1

Methods of decreasing loss of mercury during electrolysis.

Permanganate production problems.

Introduction of "Salmiac" (ammonium chloride) powders in crystalline form.

Production problems of perchlorethylene and bichloroethylene. a pilot plant was under construction 25X1 for production of monochloroacetic acid. It was to be used in the production of 2,4-D. Planned production in this pilot plant was 300 tons during 1958.

One of the major functions of the inorganic laboratories was work on inorganic chemistry problems arising in the inorganic production plants. Most of the inorganic production plants did not have their own laboratories.

b. Technical Library

This library was located on the tenth floor of the administration building. It was the largest technical chemical library in Czechoslovakia and it contained books, periodicals, and journals from all over the world.

Czechoslovakia had a unique method of obtaining the latest and most important technical publications (such as chemical abstracts) from Western nations. The government allowed many chemists to 25X1 become members of Western chemical societies and, as such, to subscribe to the journals and publications issued by these societies. The subscriptions were paid for by the Ministry of Chemical Industry, but the individual received the publication. He was then required to turn the publication over to the ministry for dissemination to the technical libraries. After these publications were given to the libraries, they were not allowed to be removed. the Communist Bloc 25X1 profited immensely from these publications. In fact, their chemical industries were kept up-to-date by utilizing the latest methods and procedures described in these publications. (See Annex D for a list of publications 25X1

c. Patents Office

The only function of this office was to assist Spolek Chemical Combine employees in patenting their inventions and ideas. This office worked in close coordination with the Incentive Awards Section. If a patent was deemed worthwhile, it was prepared in five copies. One copy stayed at

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the Spolek Chemical Combine, four copies were sent to the ministry, which screened and examined it, and in turn, forwarded two copies to the patent office in PRAGUE.

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Chemical Combine director that, in June 1958, he was promised that later in 1958 a full-time engineer would be placed in this office.

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the following ideas or inventions which were processed during the last few years:

The orientation of the growth of synthetic sapphires.
A new method of producing lithium carbonate.
Two new sulfur dyes.
The use of epoxy resins in pigment dyeing.
The use of sulfur dyes for dyeing viscose products.

c. Construction and Maintenance Department (Vystavba a Udrzba)(See Annex E)

The head of this department was known as the chief mechanic (hlavni mechanik). His offices were located in the administration building and were staffed by about 18 people. These offices included a small planning office, a drafting office, and offices for clerks and secretaries.

The primary mission of this department was maintenance of all equipment, machinery, buildings, and grounds of the Spolek Chemical Combine. It was also responsible for stocking the necessary spare parts and for purchasing new equipment.

Construction was the secondary mission of the department. The only construction projects it undertook were small, within-the-budget projects. All other construction projects at the Spolek Chemical Combine which required special appropriations were undertaken by the Projects Department.

The head of this department was Otto REHBERGER; his estimated total monthly income was 3000 crowns.

(1) Maintenance Section

The head of this section was JURENA, (fnu), who also acted as a deputy to the chief mechanic. His duties included ascertaining that maintenance schedules were followed in all departments and plants in the Spolek Chemical Combine, assisting plants and departments in urgent maintenance and repair problems, and contracting certain outside firms (such as roof workers, furniture repair firms, and tile setters) for work which could not be accomplished by his shops.

(2) Construction Section

The head of this section was KULHAVA, (fnu). His duties included planning and supervising all construction projects assigned to his section.

Examples of 1958 projects assigned to this section were as follows:

Setting up of all equipment and construction of all production lines for the production of 2,4-D in the unused half of the DDT building. This was accomplished in April 1958.

Conversion of an old unused building into a warehouse.
Setting up equipment for production of epichlorohydrin.

(3) Workshops (Dilny)

The following workshops were subordinate to the chief mechanic, and their services were shared by the Maintenance and Construction Sections.

(a) Machine Shop (Strojni)

This was the largest of all shops in this department. It had its own separate building, an estimated 150 employees, and its own internal planning and budget sections. It had several fully-equipped modern machine shops where all broken, damaged, or worn machinery was repaired and where, when possible, certain pieces of new machinery were constructed. This shop was also responsible for servicing and maintaining all elevators in the combine.

It had one bottleneck: machinists and skilled laborers working in the shops were paid on the same wage scale as chemical industry workers. Chemical workers were paid much less than their counterparts in heavy industry; therefore, the shops had a continuous problem locating and retaining qualified personnel.

(b) Boiler Shop (Kotlarna)

This shop had its own building and employed an estimated 50 to 70 persons. In addition to making boilers, the shop also made such articles as cars for the plant's narrow-gauge railroad, pressure vats, tanks and coolers. The shop was also responsible for inspecting all pressure tanks and pressure vessels to insure that they were safe.

(c) Sheet Metal Shop (Klempirna)

This shop also had its own building and employed about 30 persons. All sheet metal products for the Spolek Chemical Combine were made in this shop.

(d) Electric Shop (Elektro)

This shop had its own building and about 60 employees. It repaired and maintained all electric motors, electric installations, electric instruments, power lines, and transformer stations in the Spolek Chemical Combine. It was also responsible for maintaining all local telephones, telephone lines and cables, switchboards, and the plant wire-broadcast system.

(e) Pipe Shop (Potrubarna)

This shop maintained all piping and pipelines in the Spolek Chemical Combine as well as constructing new pipelines. It worked with piping of all types (steel, lead, ceramic, plastic) and of all dimensions. The shop did not make pipes but maintained a large stock of them.

(f) Masonry Shop (Stavebni)

This shop had its own building and employed about 10 office workers and 40 to 50 masons. In addition to working with masonry projects in the Usti Nad Labem plant, the masons also erected new housing developments for the Spolek employees.

(g) Carpentry Shop (Tesarna)

This shop employed about 20 persons and had its own building. All general carpentry work, such as building frames, beams, scaffolding, and concrete forms for the Spolek Chemical Combine were made by this shop.

(h) Cabinet Shop (Truhlarna)

This shop had its own building and about 30 employees. In addition to making cabinets, lockers, and windowframes, it constructed wooden vats and wooden filter disks and plates for presses. It also had several glaziers for all window-glass work in the Spolek Chemical Combine.

(i) Paint Shop (Lakyrnici)

This shop was in its own building and had about 25 employees. All painting, indoors and out, for the Spolek Chemical Combine was accomplished by this shop.

(j) Lead Shop (Olovarna)

This shop had its own building and about 15 employees. It made lead linings for iron vessels, solid lead vessels, and lead jackets for certain items, and it also soldered all lead pipes.

(k) Rubber Shop (Gumarna)

This shop had its own building and employed about 40 people. In addition to working with rubber, both natural and synthetic, it worked with plastics. It made rubber linings for iron vessels for protection against certain acids, in addition to doing all other rubber work required by the Spolek Chemical Combine.

(l) Incentive Machine Shop (Zlepsovatelske)

The original purpose of this machine shop was to allow inventors who had submitted ideas to the Incentive Awards Section to be able to make certain pieces of machinery or parts in order to prove or improve the value of their suggestions. However, it was seldom used for this purpose. It was being used as just another machine shop. It was not as busy as the main machine shop and was therefore often used to work on small, urgent projects. The shop was also used as an on-the-job training shop for young, inexperienced machinists.

(m) Roads and Grounds Shop (Cistota Zavodu)

These shops consisted of a number of small tool sheds and garages and employed about 15 people. They were responsible for care, cleaning and maintenance of all grounds, roads, and fences in the Usti Nad Labem plant.

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(n) Hrob Lead Plant (Zavod Hroby)

Although this was a separate plant located at HROB, it was subordinate to the chief mechanic of the Spolek Chemical Combine. This was the only metallurgical plant in the Spolek Chemical Combine. The word "metallurgical" in the official name of the Spolek Chemical Combine was added to the combine in 1856 when it was first formed. The founders thought the mountains near USTI NAD LABEM would be rich in metal ores, which could be exploited by the combine. The grade of ores discovered in the mountains never proved high enough for commercial exploitation, but the word "metallurgical" remained part of the official name.

The plant had an estimated 60 to 70 employees and manufactured lead valves, petcocks, pipes, sheets, and plates. In addition to supplying the Spolek Chemical Combine with lead products, the plant also supplied other chemical organizations in Czechoslovakia with lead products.

d. Power Department (Energie Oddělení) (See Annex F, Figure 1)

The head of this department, Engineer Pavel VORLICEK, had the title main powerman (hlavni energetic). His office was located in the plant administration building and was staffed by a deputy, GRUNT (fnu), and a female secretary.

VORLICEK was completely responsible for all power facilities in the Usti plant as well as being technically responsible for the plant's auxiliary power facilities. He was also a member of the Regional (krajske) Power Commission. there was a serious shortage of electric power throughout 25X1
Czechoslovakia. Because of this, the chief powerman for the Spolek Chemical Combine was made a member of the Regional Power Commission in order to defend the combine's interest as far as electric power was concerned.

The following power plants and facilities were subordinate to the Power Department:

(1) Steam Plant (Kotelna)

This plant employed about 20 people in three shifts. It supplied the Usti Nad Labem plant with low-pressure steam (five atmospheres or about 73.5 lbs per sq inch) and high-pressure steam (22 atmospheres or about 543.4 lbs per sq inch). The plant consumed a very poor quality brown coal.

(2) Gas Generating Plant (Generatorovy Plyn)

This plant had approximately 20 employees. It generated gas by subjecting brown coal to high temperatures. The gas thus produced was fed into the gasline network in the Usti Nad Labem plant and was used in heating furnaces and forges in the inorganic plants where high temperatures were needed.

Coal was transported to the gas plant from nearby brown coal fields by means of an overhead cable-car line. The same cars were used to transport the ashes from the plant to a nearby ash dump.

25X1

The pipelines were all above ground and declined in altitude gradually from the gas plant to the using plants. At frequent intervals, the lines had to be opened and a tar residue which collected in the pipes drained. Because of the poor quality of the brown coal, pressures were not constant and were often very low.

(3) Water Works (Vodarna)

The Usti Nad Labem plant maintained a water pumping station on the Labe River, one large underground water storage reservoir on a hill behind the plant, and three water towers in the plant area. Between 1950 and 1952 a new water line was installed from the river pumping station to the main reservoir on the hill. This pipeline, which was much larger than the old line, was constructed chiefly because the old line had received a direct bomb hit during World War II and was no longer considered reliable. The third water tower was constructed between 1952 and 1954.

[redacted] the water situation was strategically the most important shortcoming of the plant, since it could not operate longer than ten minutes if the pipeline were to fail. 25X1

The chief of the water works had an office near the boiler works and had approximately 20 subordinates.

(4) Rectifier Plant (Usmernovace)

The rectifier plant consisted of three buildings in which alternating current was changed into direct current for the plant's direct current circuit. This plant was also charged with maintenance of all DC lines in the Usti Nad Labem plant.

The newest building was constructed between 1938 and 1940. The equipment in this building was constructed by the Swiss firm Brown-Boveri in BADEN. Plans called for the installation of modern mercury rectifiers as soon as possible.

(5) Transformer Station (Transformator)

[redacted] not sure of the location or types of transformers used by the plant. [redacted] the transformers were used to reduce the incoming high voltage current down to 550 and 220 volts. 25X1

The plant used two different sources of electric power. One was a thermo-power plant at TRMICE and the other was the hydroelectric power plant at STŘEKOV.

(6) Narrow-Gauge Railroad Line (Uzkokolejka)

The plant railroad line was formerly subordinate to the transportation section of the Administrative Department, but because of frequent electric line breakdowns, the chief powerman was compelled to accept the responsibilities.

This line employed an estimated 20 persons. It worked on the overhead trolley principle, had approximately an 80 to 90-cm gauge, and had about 20 locomotives. All switching was done manually by the locomotive engineer or his assistant. The plant had difficulty getting dependable employees for this line. There were frequent accidents and derailments caused by carelessness and speeding.

25X1

(7) Cable-Car Line (Lanovka)

The primary purpose of this line was to transport brown coal to the gas generator plant and to remove ashes and other wastes from the plant to a dump. The brown coal mines were about 8 km west of the plant. The cars on this line arrived at the plant about 30 seconds apart.

25X1

no bottlenecks other than infrequent breaks in the cable line.

e. Administrative Department (Administrativa) (See Annex F, Figure 2)

25X1

The head of this department was Bohumil PECKA, the third-ranking man in the Spolek Chemical Combine. This department, in addition to accomplishing all administrative functions for the Usti Nad Labem plant, also handled most of the administration of the auxiliary plants. Nine administrative sections were subordinate to the department head.

25X1

(1) Legal Section (Pravni)

The chief of this section was Dr. Robert REZNY 25X1
He had another attorney as an assistant and one female secretary. The primary mission of this section was to protect the interests of the Spolek Chemical Combine in all legal matters, especially in matters of contracts. REZNY, who was considered a very competent person, often attended legal trials, pleading the Spolek 25X1
Chemical Combine's side of breach of contract cases.

(2) Bookkeeping Section (Uctarna)

This office was located in the administration building and had about 25 employees. In addition to doing all bookkeeping work for the Spolek Chemical Combine, this office also made out the payroll for the Usti Nad Labem plant.

(3) Housing Administration Section (Sprava Domu)

This office, with about 20 employees, assigned, controlled and maintained all the employee housing of the Spolek Chemical Combine. There were approximately 1000 housing units belonging to the Spolek Chemical Combine. Some of the housing was very old (circa 1890) and some was post-World War II construction. Rent for the housing was very reasonable and was automatically deducted from the employee's salary.

(4) Transportation Section (Dopravni)

This section was responsible for all transportation, with the exception of the plant's narrow-gauge railroad, in the Usti Nad Labem plant. It had about 50 employees, including office workers and drivers. It coordinated all incoming and outgoing railway shipments and worked very closely with the local Usti Nad Labem railroad yards and the Ministry of Transportation. It had about eight large trucks (used mostly for short distance hauling) and three sedans.

The section was also responsible for traffic safety in the Usti Nad Labem plant.

25X1

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(5) Purchasing Section (Nakupni)

This section was divided into several unrecalled branches, each with about six employees. Each branch was responsible for an unknown part of all purchasing for the Spolek Chemical Combine. All chemical imports were ordered through Chemapol, a national enterprise, in PRAGUE. This section handled local procurements, but the chiefs of each department could also purchase small, locally-available items and present the receipts to the appropriate branch of this section.

(6) Sales Section (Prodejni)

This section had about 30 employees and was concerned mostly with paper work. There were no active salesmen. Their chief function was filling contracts and insuring that the products were received by the consumers in the required time, quantity, and quality.

(7) Warehouse Section (Sklady)

This section had an unknown number of warehouses and storage points, including warehouses for finished products, raw materials, machinery and spare parts, machine-shop parts, electrical products and parts, chemical products, laboratory equipment, office supplies, inflammables, and nitro compounds. In addition to being responsible for storage, this section accomplished all packing and crating of products produced by the Usti Nad Labem plant.

Most of the warehouses were in the older buildings. The section 25X1 continually complained of lack of space and modern warehouse equipment. no underground storage facilities at the Usti Nad Labem plant.

(8) Communications Section (Spojovaci)

This section, consisting of two large rooms in the administration building, was actually a message center and distribution center. All incoming and outgoing correspondence came through this office.

25X1

(9) Printing Section (Tiskarna)

This section printed forms, letterheads, advertising pamphlets, and labels for the use of the Spolek Chemical Combine. It also had a small book-binding shop. This section was located in the basement of the administration building.

f. Other Departments Probably Directly Subordinate to the Director

the following depart-
ments were probably subordinate to the director of the Spolek 25X1
Chemical Combine.

(1) Technical Control Department (Technicka Kontrola)

This department employed about 70 people, mostly analytical chemists. The head of the department was Engineer Antoni HOFFMAN, 25X1
his deputy was Engineer KUBEC (fnu)

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25X1

This was a new department which was started by order of the Ministry of Chemical Industry in about 1951. The primary mission of this department was to control the quality of all raw material imported into the Spolek Chemical Combine and of all finished products leaving the Spolek Chemical Combine. It also controlled the quality of all internal products going from one internal plant to another.

The head of this department had the right to stop production on all products that did not meet required standards. It had its own laboratory for testing the various products. It also had the responsibility of analyzing incoming fresh water for purity, waste products for acidity, and air for pollution. A small glass-blowing sub-section, employing about five persons, was part of this department.

(2) Planning Department (Planovaci)

The chief of this department was Miloslav KESSER, a Party member. He was responsible for production and financial plans for the Spolek Chemical Combine. The plans were made on a yearly basis and further broken down into monthly plans. KESSER had to work in close cooperation with heads of all the plants and heads of the various departments. 25X1

(3) Cadre Department (Kadrove Oddeleni)

This department was headed by SVOBODA (fnu) [redacted] He maintained complete background dossiers on all key employees of the Spolek Chemical Combine to determine their political reliability. The dossiers were kept up-to-date on each person's activities by means of informers, the plant Party organization, and the ROH. 25X1

Approval of this department was required for promotion, transfer, demotion, discharge, or foreign travel permits for key personnel.

(4) Personnel Department (Osobni)

This department maintained personnel and qualification records, controlled time cards, hired new personnel, and handled insurance and tax collections for the employees, in addition to other functions. The office was located in the administration building and had about six employees.

(5) Work and Wages Department (Prace a Mzdy)

This department was located in the administration building and was headed by PELC (fnu) [redacted] PELC controlled manpower and wages for the Spolek Chemical Combine. He decided, according to the budget and plans, the number of employees in each department, section, sub-section or office; controlled salaries and wages; decided the number, amount and recipients of bonuses; and processed requests for promotions. 25X1

(6) Social Department (Socialni)

[redacted] this department may have been subordinate to the plant ROH, since its functions were similar. Its office was located in the administration building and it had three or four employees. Its mission was to insure that employees had good working conditions, that factory housing was adequate and sanitary, and that plant dressing and shower rooms were adequate. It also scheduled vacations to the Spolek Chemical Combine's health resorts. It worked in close cooperation with the plant physician, housing administration, and ROH. 25X1

(7) Special Department (Zvlastni) 25X1

This department was located in the administration building and was headed by ZIKA (or ZYKA) (fnu), The mission of this department was plant security and control of classified documents. It was responsible for the plant civil defense, plant guard system, and plant fire department. Civil defense classes were held once every two months. A few protective masks and suits of protective clothing were shown during these classes, but were never issued to personnel; they were not available. 25X1

This department issued passes to all plant employees and visitors. The guards checked all packages and briefcases of employees when entering or leaving the plant. During the day, guards, armed with pistols, patrolled the plant alone, but after dark they patrolled with dogs.

The fire department had a separate building and modern firefighting equipment.

The classified document section was not very efficient and often lost documents. occasionally received classified documents by mail direct from PRAGUE that had not gone through this department. the following examples of typical classified documents: descriptions of factories or plants, reports of plant employees on all visits to foreign countries, and reports on dyes and dye intermediates and their production in the Communist Bloc. 25X1

(8) Broadcasting Department (Rozhlas)

This broadcasting department had only one employee, a female, who had an office in the administration building. The broadcasts included propaganda announcements, current events, meetings, and lectures. The wire broadcast system was very unpopular, and the workers would often disconnect the loudspeakers. Loudspeakers were located in all strategic spots so that the entire Usti Nad Labem plant was effectively saturated.

(9) School Department (Skoleni Kadru)

This department gave young elementary school graduates two years of technical education so as to provide the Spolek Chemical Combine with a future source of qualified personnel. The youths were trained as laboratory technicians, electricians, machinists, chemists' assistants, and the like, according to the Spolek Chemical Combine needs and functions. Individuals receiving this schooling had to agree to work at the plant for at least five years after the two years of training. This training consisted of classroom work in the mornings and practical work in the afternoons. The students received a small (amount unrecalled) salary and free housing and meals.

Another function of the school department was to provide free, after-duty technical foreign language courses to key plant employees. 25X1
English, German, and Russian were the only languages taught. 25X1

g. Supporting Organizations

(1) National Health Institute (Ustav Narodniho Zdravi)

The National Health Institute furnished the plant with a permanent medical staff of four physicians, five or six nurses, and one dentist. In addition to this permanent staff, specialists in women's illnesses, skin diseases, tubercular illnesses, and X-ray technicians made periodic visits to the plant.

The plant dispensary, which was in a former villa on plant property, had wards totaling about 30 beds and complete equipment for a small hospital. The beds were seldom used. Two ambulances were available at all times.

One of the plant physicians had to certify all sick leaves. The chief physician decided whether an employee's health was poor enough for retirement.

(2) Restaurants and Dining Rooms National Enterprise (Restaurace a Jidelny, Narodni Podnik)

This enterprise provided the Usti Nad Labem Plant with a canteen. The canteen served four choices of meals. The best meal cost six crowns and was only for visitors and plant VIP's. The next best meal cost 3.50 crowns and consisted of soup, meat or fish, potatoes or rice, dessert, and coffee or tea. The next choice and the most popular, cost 2.80 crowns, and consisted of soup, meat, potatoes, dessert and coffee or tea. The food was of poorer quality than the meal costing 3.50 crowns. The last choice was a bland meat for persons suffering from stomach ailments; this could only be had upon presentation of a doctor's recommendation. The canteen also served a weak beer, ice cream, cookies and pastries, and milk. The employees purchased weekly meal tickets in advance.

The canteen was open from 0700 to 0800, from 1200 to 1500, and from 1600 to 1800 hours.

25X1

h. Party and Union Organization

(1) Plant Organization of the Communist Party of Czechoslovakia

This organization had two rooms in the administration building and was headed by KLOFAC, (fnu) [redacted] He had one female secretary. The mission of this organization was to protect the interests and insure the development of the Party at the plant.

(2) Plant Council of the Revolutionary Trade Movement (Zavodni Vybor Revolucni Odborove Hnuti - ROH)

This organization was, in theory, a labor union and was to protect the rights of the workers. Actually, it attempted to increase production and norms and to protect the interests of the Party and government through propaganda. It organized sport and cultural clubs and had its hand in the educational and health problems of the workers. All employees had to belong to the organization and were required to pay dues amounting to one percent of their total monthly income.

The head of the plant ROH was Vratislav CHLADEK, the former head of the dye mixing plant of the Spolek Chemical Combine. His staff totaled about five persons.

25X1

4. Auxiliary Plants (Poboone Zavody)

The Spolek Chemical Combine had nine auxiliary plants, all of which were made part of Spolek Chemical Combine during the 1957-1958 reorganization of the Czechoslovak chemical industry. Several of these plants were very old and were equipped with obsolete equipment. These plants were not being modernized, since the government had decided this was economically unwise, but were allowed to continue work with their old equipment as long as possible without investing further funds.

a. Nestemice Plant

This plant, with an estimated 500 employees, was the largest auxiliary plant in the Spolek Chemical Combine. It was located in NESTEMICE, about 8 km from USTI NAD LABEM.

The chief product was soda ash (80,000 tons per year maximum production), but other products were caustic soda, calcium chloride, sodium bichromates, calcium carbonates and detergents. [redacted] this was the only plant in Czechoslovakia producing soda ash. Czechoslovakia had to import additional soda ash from Austria and East Germany to satisfy her needs. 25X1

The director of the plant was SVOBODA (fnu), and the chief technologist was PAVLIK (fnu). The plant had a small administrative staff, but most of the administrative work was accomplished at the Usti Nad Labem plant.

b. Retenice Plant

This plant, located at RETENICE, had about 50 employees; its only product was aluminum sulfate. It was joined to the Spolek Chemical Combine in 1958. Before this, it was known as the Dudek Firm (Firma Dudek). It was one of the plants considered by the government as being too old for investment of further funds.

c. Roudnice Plant

This plant was located in ROUDNICE and had about 50 employees. Its only product was various types of frits. It too joined the Spolek Chemical Combine in 1958.

d. Velvety Plant

This plant was located in VELVETY and joined the Spolek Chemical Combine in 1958. Its products were unknown. This was a former military factory used by the Germans to fill aerial bombs during World War II. While attending various meetings of Spolek Chemical Combine department heads, [redacted] the Ministry of Defense still had some interest in this plant. 25X1

e. Duchcov Plant

This plant, located in DUCHCOV, had about 40 employees and joined the Spolek Chemical Combine in 1958. Its only products were wood stains. The head of the plant was SCHARNAGL (fnu).

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25X1

f. Chabarovice Plant

This plant, located in CHABAROVICE, had about 40 employees and joined the Spolek Chemical Combine in 1958. Its only products were ultramarine dyes used as laundry bluing and paper dyes. This was another plant in which the government considered it unwise to invest further funds.

g. Boletice Plant

This plant, located in BOLETICE, joined the Spolek Chemical Combine in 1958 and had about 100 employees. Its only products were textile auxiliary agents such as wetting agents, emulsifying agents, and detergents. Its chief engineer was J. URBASEK.

h. Mnisek Plant

This plant, which was located in MNISEK, had about 80 employees and joined the Spolek Chemical Combine in 1958. It produced the same type textile auxiliary agents as the Boletice plant.

i. Krasne Brezno Plant

This plant, which was located in KRASNE BREZNO, a suburb of USTI NAD LABEM, had approximately 80 employees and joined the Spolek Chemical Combine in 1958. It produced laboratory analytical grade chemicals and thioglycolic acid (40 tons per year) used for hairdressing.

5. Production at the Usti Nad Labem Plant

Listed below are the various products produced at the Usti Nad Labem plant [redacted] Building numbers used below refer to plant layout described in Annex G. 25X1

a. Trisodium Phosphate Production (Bldg 8)

Trisodiumphosphate production figures were unknown [redacted] 25X1 it was consumed entirely in Czechoslovakia. A small section of this plant produced phosphoric acid used in the production of $Na_3 PO_4$.

b. Superphosphate Production (Bldg 8)

Production figures were unknown [redacted] but production was consumed 25X1 entirely in Czechoslovakia.

c. Nitrogen Production (Bldg 11)

This building was used for the production of ammonia until 1953. Since that time only nitrogen was produced, even though the equipment for producing ammonia was still there. Production figures for nitrogen were unknown, but all nitrogen produced was consumed by Spolek Chemical Combine.

d. Solvents Production (Bldg 12)

The principal solvent produced as methyl-cyclohexanone. Production figures were unknown. Methyl-cyclohexanone was exported to South America and other countries [redacted] The Spolek Chemical Combine 25X1 was the only producer in Czechoslovakia of this solvent, which was mainly used in the paint and lacquer industry.

Also at this plant the butyl ester of 2,4-D herbicide was being planned as a product for the year 1959.

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25X1

e. Cryolite Production (Bldg 23)

Hydrofluoric acid and aluminum fluoride were produced here for the production of Na_3AlF_6. The capacity of this plant to produce HF was 3000 to 4000 tons per year. Actual production of hydrofluoric acid was unknown. Some of the hydrofluoric acid produced here was used by the Spolek Chemical Combine in the production of freon, a refrigerant. The demand for cryolite in Czechoslovakia had decreased, as the cost was too high.

f. Carbon Bisulfide Production (Bldg 27)

This plant produced approximately 3 to 3.5 tons of carbon bisulfide per year. Most of the carbon bisulfide was shipped to viscose rayon plants in Czechoslovakia. A part of the carbon bisulfide was used at the Spolek Chemical Combine in the production of potassium ethyl xanthate, a floating agent.

This plant also produced on request $Ca_3(AsO_3)_2$ for use as a coating on wood to prevent decay. Approximately 1000 tons per year were produced.

g. Alizarin Production (Bldg 33)

This plant produced an intermediate for dyes called anthraquinone-B sulfonic acid, (commonly known as silver salts because of its appearance), and alizarin. This intermediate was used in the production of "Ostanthrene Blue" (local name). Chemically it was called "Indanthrene Blue." Approximately 60 tons of "Ostanthrene Blue" were produced annually.

h. Trichloroethylene Production (Bldg 39)

This plant produced about 7000 tons a year of this product. This was the full capacity of the plant. Most of it was used for the Czechoslovak dry cleaning industry. In addition, approximately 200 tons of perchloroethylene and hexachloroethylene were produced annually and shipped to other plants (names unknown) in Czechoslovakia.

i. Ammonium Chloride Production (Bldg 47)

Production figures were unknown, but [redacted] this was the only plant in Czechoslovakia for this product. Total production was consumed in Czechoslovakia and not exported. 25X1

j. Hydrochloric Acid Production (Bldg 48)

Production figures were unknown, but [redacted] it was all used within the Usti Nad Labem plant. The Neratovice plant sent HCl to ÚSTÍ NAD LABEM when Usti Nad Labem's HCl plant was closed for repair work. 25X1

k. Sodium Sulfate Production (Bldg 49)

Production was stopped in 1954 and equipment was dismantled in September 1958. This building was probably to be used as storage space.

l. Epichlorohydrin Production (Bldg 50)

This product was used in the production of plastics and resins for paints and adhesives at the Usti Nad Labem plant.

25X1

m. Synthetic Precious Stones Production (Bldg 64)

The raw material for an estimated five million carats per year of all types of synthetic precious stones was produced at the Spolek Chemical Combine. Chemically these stones were aluminum oxide, mixed with other metallic oxides to give them the desired color. The names of these stones and their colors were Rose de France (pink), Alexandrite (color unknown), Corund (red), Sapphire (colorless), Emerald (green), Tourmaline (grey-black), and Chrysoprase (yellow). Another type of stone called Spinels was made from magnesium aluminates, but most of the stones were made from aluminum oxides. These stones were exported [redacted] 25X1
[redacted] These stones were used for 25X1
bearings, cutting other stones, and in the jewelry industry. A plant in TURNOV made bearings from these stones.

n. Azo Dyestuffs Production (Bldg 68)

Approximately 1000 tons per year of various dyestuffs were produced in this plant. These dyes were grouped as acidic, basic, chromates, acid pigments, food dyes, and dyes soluble in wax and oils.

o. Dye Intermediate Production (Bldg 69)

Benzene and naphtha derivatives were produced here to be used in the azo dyestuff plant. Some of the intermediates were shipped to East Bohemian Chemical Works in RYBITVI. In addition 300 to 400 tons of phenyl beta naphthalene were produced per year and shipped to the Gottwaldov Rubber Factory.

p. Hydroxynaphthoic Acid Production (Bldg 73)

Each year 200 to 250 tons were produced. All the production was consumed at the Usti Nad Labem plant in the production of ultrazoles dyestuff. It was the only producing plant in Czechoslovakia for this chemical.

q. Beta-Naphthol Production (Bldg 74)

Each year 1300 tons, the full capacity of this plant, was produced. It was used at the Usti Nad Labem and Rybitvi plants. There was a modern plant at RYBITVI producing this substance, and, unless the demand for this product increased considerably, the plant at USTI NAD LABEM was to close and only the plant at RYBITVI would produce this chemical for dyestuffs.

r. Dian Production (Bldg 75)

This plant produced an estimated 400 tons of dian per year. It was used in synthetic resins. The formula for dian was known by the trade name "Bisphenol" in the USA.

s. Synthetic Resin Production (Bldg 77)

This plant used the following raw materials in the production of synthetic resins: glycerol, dian, pentaerythritol (not nitrated for possible use as a high explosive charge), phthalic anhydride, maleic anhydride, and linseed oil.

25X1

These raw materials were combined in various ways to produce resins used in the paint, varnish, and lacquer industries. The finished products went under the following trade names: Abietin, Rezalkyd, Abiester, Abifen, and Sadurit. This was the only plant in Czechoslovakia for producing this type of resins. Yearly production of these resins was estimated to be 2000 tons, including epoxy resins. Approximately 100 tons were exported to Finland and China; the rest of the production was consumed in Czechoslovakia. [redacted] plans had been made for the construction in 1959 of a new plant at ÚSTÍ NAD LABEM larger than the present plant. Great emphasis had been placed on synthetic resins. These plans were in the hands of the synthetic resin plant manager [redacted] the manager indicated that his project had number one priority in Czechoslovakia. This new plant was to triple present production and would be built mainly for exporting synthetic resins to the USSR and the satellites. 25X1 25X1

Another type of resin produced here was epoxy (sometimes called epoxide resins). The trade name used was Chs-Epoxy, and Chs-Epoxide. This resin was produced from phthalic anhydride and epichlorohydrin. It was mainly used for insulating copper wire and for adhesives.

t. Sulfur Dyestuff Production (Bldg 80)

Approximately 700 tons of sulfur dyes were produced annually for use on cotton and viscose materials. This was the only plant of this type in Czechoslovakia producing this type of dye. It could produce all colors except black. Black sulfur dyes were produced in the Rybitvi plant.

u. Sulfite Production (Bldg 84)

The various types of sulfites produced were sodium sulfite (Na_2SO_3) in hydrated and anhydrous forms, sodium thiosulfite (NaS_2O_3), sodium hydrogen sulfite ($NaHSO_3$) in liquid form, and sodium pyrosulfite ($Na_2S_2O_5$). Production figures for these sulfites were unknown [redacted] Pyrosulfite [redacted] was the only sulfite exported, and this was shipped to [redacted] More than 50 percent of the pyrosulfite production was shipped to these countries. 25X1

v. Soluble Amines Production (Bldg 85)

This plant produced P-phenylenediamine, m-phenylenediamine, and m-toluylenediamine. The maximum estimate was 150 tons per year. None of these amines were exported, but were used domestically mainly as dyestuff intermediates.

w. Ultrazoles Production (Bldg 86)

This product was known as azoic dye or naphthol AS dye. It was produced by reacting hydroxynaphthoic acid and aniline, condensing with PCl_3, to yield naphthol AS. Production varied from 300 to 400 tons per year. Small quantities were exported to South America, [redacted] and the Scandinavian countries, but most of the product was consumed in Czechoslovakia. PCl_3 was imported from PIESTERITZ, East Germany. [redacted] the Usti Nad Labem plant was the only user of PCl_3 in Czechoslovakia. 25X1 25X1

x. Barium Chloride and Calcium Chloride Production (Bldg 88)

Barium chloride was produced in crystal form, reagent grade, and in solution form. Most of the production was consumed in the Spolek Chemical Combine for use in the electrolysis of salt. Some barium chloride was sent to the Novaky

and Neratovice plants. It was rumored that the production of barium chloride would be moved to PREROV or HRUSOV. Production figures on barium chloride were unknown. Some calcium chloride was also produced in this plant.

y. Blanc Fix (Bldg 89)

This production consisted chiefly of barium sulfate and was used in various paper filling plants in Czechoslovakia. Production figures were unknown.

z. Sodium Fluoride, Ammonium Fluoride, and Barium Sulfate Production (Bldg 89)

Production figures for these chemicals were unknown. Up to 1952 and 1953 this plant produced hydrofluoric acid.

aa. Tungstic Acid Production (Bldg 90)

An estimated 500 tons per year of tungstic oxide (WO_3) of the purest quality was produced for use in the metallurgical industry. It was mainly used for filaments or special steels. It was consumed in Czechoslovakia and not exported.

In this building calcium molybdate, ammonium sulfate, and freon (in the pilot stage) was produced. Freon production started in June 1958 and was estimated at 100 tons per year.

bb. Sulfuric Acid Production (Bldg 98)

This plant produced 42,000 to 45,000 tons of 100 percent sulfuric acid yearly. Chlorosulfonic acid production was roughly estimated at 5000 to 7000 tons per year. The chlorosulfonic acid was consumed mainly by the Czechoslovak pharmaceutical industry. Because of a shortage of sulfuric acid in Czechoslovakia, this produot was not exported. It was produced at the Usti Nad Labem plant by the catalytic oxidation of vanadium.

In the Neratovice plant, the production was roughly estimated at 5000 to 7000 tons per year, mainly for the pharmaceutical industry. It was chiefly used in the manufacture of saccharine and sulfa drugs.

cc. Bleach Powder Production (Bldg 103)

Calcium hypochlorite (solid) and sodium hypochlorite (solution) were the only chemicals produced in this plant. Production figures were unknown. Source stated that research was being carried on at the Research Institute of Inorganic Chemistry at ÚSTÍ NAD LABEM to find some way of stablizing calcium hypochlorite during storage. The institute believed that the solution to the problem was in the preparation of calcium hypochlorite instead of using additives to stabilize it.

dd. Liquid and Gaseous Chlorine Production (Bldgs 108 and 109)

Exact production figures were unknown, but an estimated production figure for both liquid and gaseous chlorine was 16,000 tons per year. Most of the chlorine produced was used in the plant in ÚSTÍ NAD LABEM.

25X1

The three plants in Czechoslovakia that produced chlorine were in ÚSTÍ NAD LABEM, NERATOVICE, and NOVAKY. It was estimated that the Novaky plant produced approximately 13,000 tons of chlorine (liquid and gaseous) per year. The Neratovice plant, which produced 16,000 tons per year, was ultimately to become the greatest producer in Czechoslovakia, as the plant was being enlarged.

ee. DDT and Chloral Production (Bldg 110)

Chloral was produced and converted into technical grade DDT. From 1955 to 1957 an average of 1000 tons of DDT was produced yearly. In 1958 production dropped to 500 or 600 tons per year, because export demands declined. China, which was the chief importer, decided not to import large amounts of DDT. The plant at ÚSTÍ NAD LABEM sent the technical grade of DDT to NERATOVICE for formulation. Plans were made to use this building and enlarge its facilities for the production of 2,4-D herbicides.

ff. Octadecylamine Production (Bldg 117)

Construction of this plant started in April or May 1958 and was not completed as of September 1958 [redacted] This plant was designed to produce an estimated 100 to 200 tons per year of octadecylamine for use as an inhibitor for corrosion of steam pipes. 25X1

gg. Solid Caustic Soda Production (Bldg 118)

This plant received KOH and NaOH in solution and evaporated it to dryness. Production figures were unknown, but [redacted] it was consumed in Czechoslovakia. This building also housed a small room for purifying NaOH and KOH for use in analytical work. 25X1

hh. Magnesium and Zinc Chloride Production (Bldg 120)

This plant produced $MgCl_2$ and $ZnCl_2$ in solution form, and also $ZnCl_2$ in solid form. These chemicals were not used at the plant at ÚSTÍ NAD LABEM, but consumed in other plants (names unknown) in Czechoslovakia. Estimated production of these two chemicals combined did not exceed 500 tons per year.

ii. Sodium Hydroxide and Potassium Hydroxide Production (Bldg 121)

Sodium chloride and potassium chloride were imported from East Germany (Strassfurt area). These salts were electrolyzed, using the mercury cell method, and yielded sodium hydroxide or potassium hydroxide, chlorine, and hydrogen. Production figures were unknown. The plant at ÚSTÍ NAD LABEM was the only plant in Czechoslovakia that produced potassium hydroxide.

jj. Calcium Chloride Production (Bldg 124)

Waste lime was reacted with hydrochloric acid to produce technical grade calcium chloride solution. Approximately 500 to 1000 tons were produced annually. This product was not exported, but used entirely in Czechoslovakia.

kk. Potash Production (Bldg 126)

This was the only plant in Czechoslovakia (except the plant at KOLIN) that produced potash. Potash production was approximately 500 tons per year. None was exported.

[redacted]

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[redacted] 25X1

ll. Permanganate Production (Bldg 128)

Manganese dioxide was imported from the USSR, Rumania, and Hungary as one of the ingredients for producing potassium permanganate. Each year 1500 tons were produced. It was exported chiefly to South America and the Scandinavian countries. It was not used in the plant at ÚSTÍ NAD LABEM but sent to NERATOVICE for use in the production of saccharine. There were plans at ÚSTÍ NAD LABEM to enlarge the present plant, as potassium permanganate was a good product for export; but because of the production of potassium permanganate at BITTERFELD, East Germany, these plans were discarded.

mm. Artificial Manganese Dioxide Production (Bldg 129)

Neratovice plant and other plants in Czechoslovakia sent the sludge of MnO_2 to the plant at ÚSTÍ NAD LABEM. This technical grade of MnO_2 was treated with diluted sulfuric acid at high temperatures, filtered, and dried. This process yielded MnO_2 in a range of 75 percent active oxygen. This synthetic MnO_2 was used chiefly in making dry batteries in Czechoslovakia. Estimated production was 400 tons per year.

nn. Anthraquinone Production (Bldg 141)

Anthraquinone was produced by the oxidation of anthracene. The plant at ÚSTÍ NAD LABEM was the chief consumer of this product, but in the future a large amount was to be shipped to RYBITVÍ for the production of dyes. In 1957, the plant at ÚSTÍ NAD LABEM produced 180 tons and in 1958 produced 220 tons. In 1958 the building was enlarged and its capacity was to be approximately 250 tons per year.

oo. Sodium Hydroxide and Potassium Hydroxide Production (Bldg 144)

Information entered in this report for Bldg 121 applies to Bldg 144.

pp. Miscellaneous Information

Activated carbon had not been produced in the plant in ÚSTÍ NAD LABEM since 1925, when the manufacture was transferred to the plant at HRUŠOV. The Hrušov plant was still producing activated carbon. There was no war gas production or chemical warfare research conducted at the Usti Nad Labem plant on toxic agents. [redacted] no plant in Czechoslovakia producing methyl dichlorophosphene or diethyl methylphosphonite. [redacted] no plant in Czechoslovakia producing parathron or systox. 25X1 25X1

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Annex A

CONCEPT OF THE ORGANIZATION OF THE SPOLEK CHEMICAL COMBINE AT ÚSTÍ NAD LABEM, CZECHOSLOVAKIA

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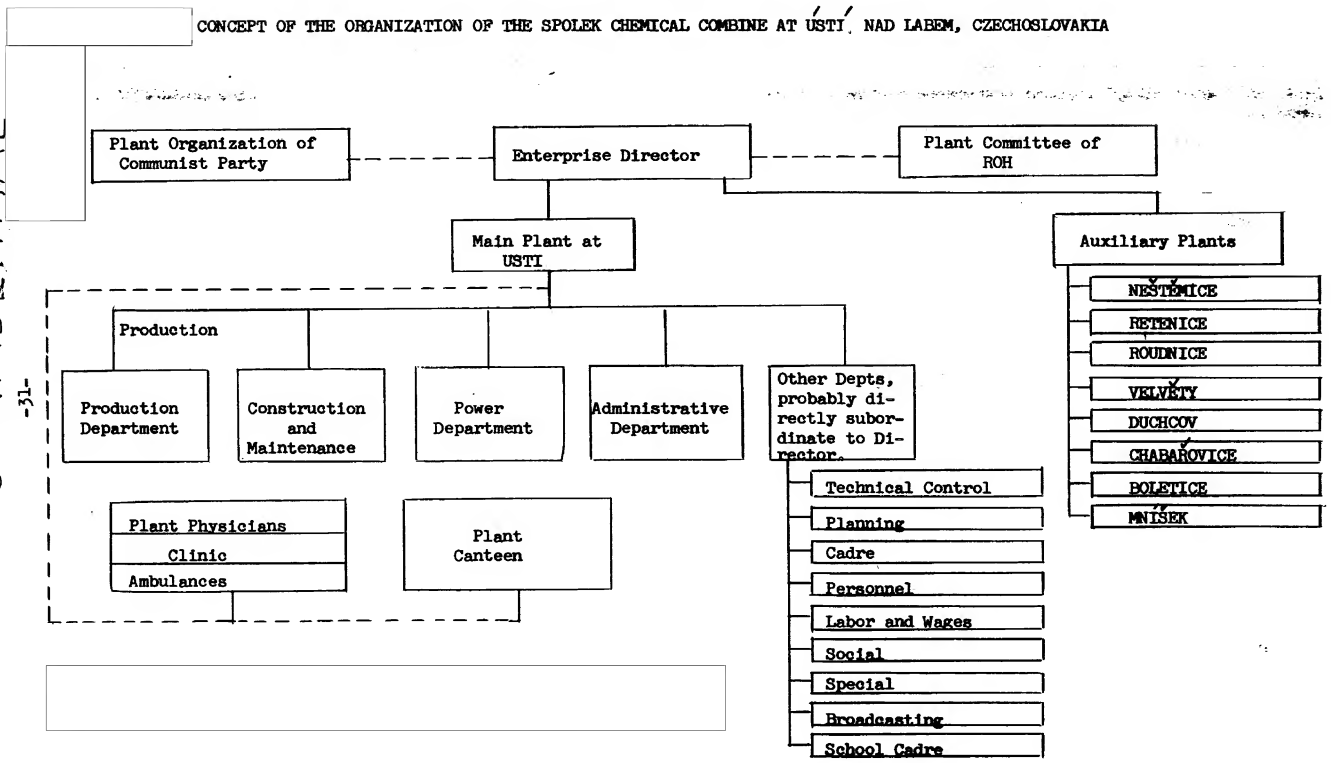

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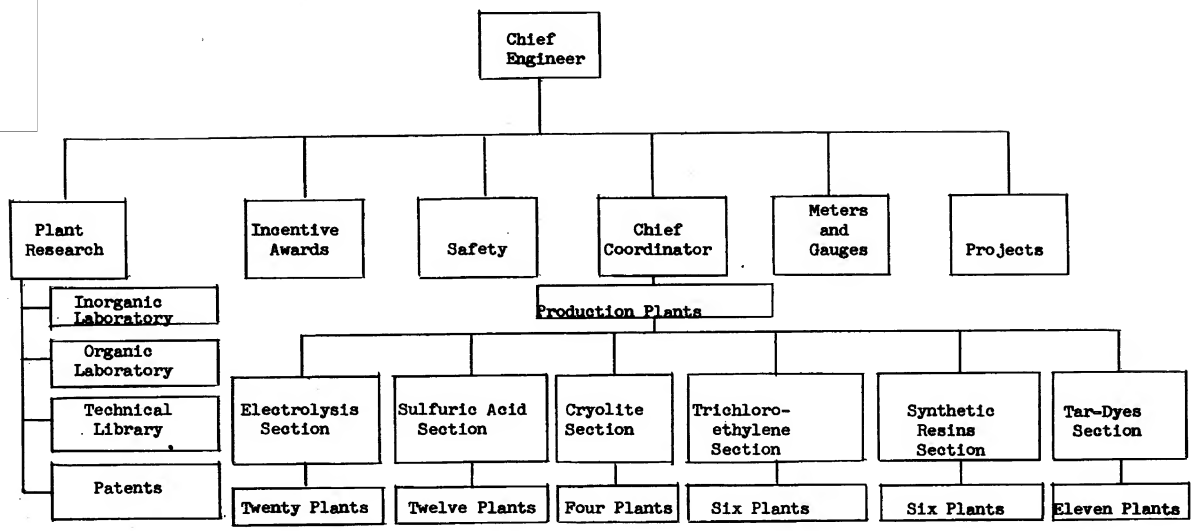
Annex B

25X1

PRODUCTION DEPARTMENT AT THE SPOLEK CHEMICAL COMBINE IN USTI-NAD LABEM



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Annex C

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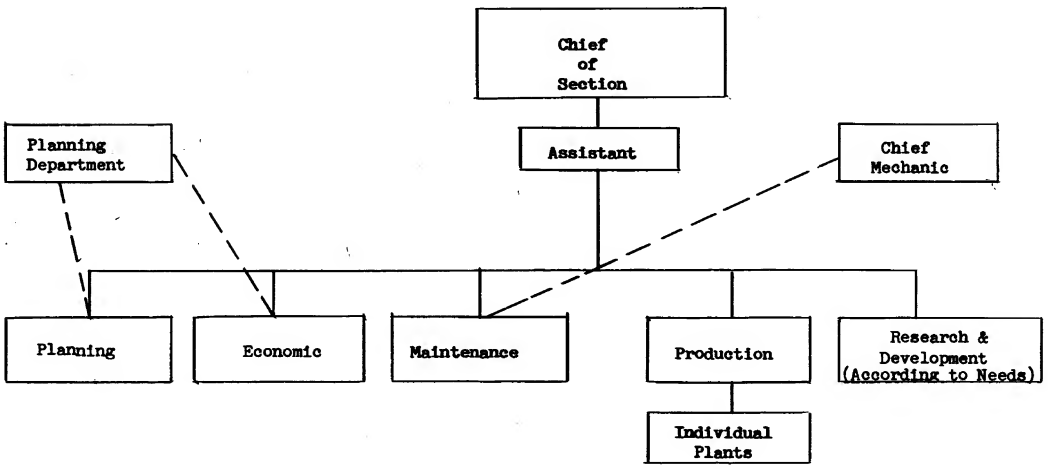
ORGANIZATION OF THE PRODUCTION SECTIONS AT THE SPOLEK CHEMICAL COMBINE IN USTI NAD LABEM



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Annex D

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LIST OF WESTERN CHEMICAL PUBLICATIONS IN THE TECHNICAL LIBRARY AT SPOLEK CHEMICAL COMBINE IN USTI NAD LABEM (C)

"American Dyestuff Reporter"

"Analyst" (England)

"Analytical Chemistry" (WASHINGTON, D.C., U.S.A.)

"Angewandte Chemie" (West Germany)

"Annual Reports on the Progress of Chemistry" (LONDON, England)

"Annual Reports on the Progress of Applied Chemistry" (LONDON, England)

"ASTM-Bulletin" (USA)

"Atomics" (LONDON, England)

"Berichte der Deutschen Chemischen Gesellschaft" (West Germany)

"Brennstuff-Chemie" (West Germany)

"British Abstracts" (LONDON, England)

"British Plastics" (LONDON, England)

"Canadian Journal of Chemistry" (Canada)

"Chemical Abstracts" (USA)

"Chemical Age" (LONDON, England)

"Chemical and Engineering News" (USA)

"Chemical Industries" (USA)

"Chemical and Metallurgical Engineering" (England)

"Chemical and Process Engineering" (England)

"Chemical Trade Journal" (England)

"Chemie-Ingenieur Technik" (West Germany)

"Chemischer Zeitung" (West Germany)

"Chemische Technik" (West Germany)

"Chemisches Zentralblatt" (West Germany)

"Chemistry and Industry" (England)

"Chemia" (Switzerland)

"Chemie et Industrie" (France)

"Ciba-Rundschau" (Switzerland)

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"Dyer, Textile Printer" (England)

"Experientia" (Switzerland)

"Farbe und Lacke" (West Germany)

"Gazzeta Chemica Italiana" (Italy)

"Helvetica Chemica Acta" (Switzerland)

"India Rubber Journal" (England)

"Industrial Engineering Chemistry" (USA)

"Journal of the American Chemical Society"

"Journal of Applied Chemistry" (England)

"Journal of Chemical Education" (USA)

"Journal of the Chemical Society" (LONDON, England)

"Journal of Physical Chemistry" (USA)

"Journal of Polymer Science" (USA)

"Journal für Praktische Chemie" (West Germany)

"Journal of the Science of Food and Agriculture" (England)

"Journal of Scientific Instruments" (England)

"Kolloir- Zeitschrift" (West Germany)

"Kunststoffe" (West Germany)

"Liebig's Annalen der Chemie" (West Germany)

"Makromolekulare Chemie" (West Germany)

"Manufacturing Chemistry" (West Germany)

"Melliand Textile Berichte" (West Germany)

"Modern Plastics" (USA)

"Nature" (LONDON, England)

"Oel und Kohle" (Probably West Germany)

"Oesterreichische Chemiker Zeitung" (Austria)

"Organic Syntheses" (USA)

"Paint, Oil and Colour Journal" (England)

"Plastics" (England)

[redacted] 25X1

"Quarterly Review" (England)

"Recueil des Travaux Chimiques des Pays-Bas" (Probably Netherlands or France)

"Reports on the Progress of Applied Chemistry" (Country of publication unrecalled)

"Revue des Produits Chimiques" (France)

"Rubber Age" (England)

"Zeitschrift für analytische Chemie" (West Germany)

"Zeitschrift für angewandte Chemie" (West Germany)

"Zeitschrift für anorganische Chemie" (West Germany)

"Zeitschrift für anorganische und allgemeine Chemie" (West Germany)

"Zeitschrift für Elektrochemie und Angewandte Physikalische Chemie" (West Germany)

"Zeitschrift für Elektrochemie Berichte der Bunsengesellschaft" [redacted]

"Zeitschrift für Physikalische Chemie" (Country of publication unrecalled)

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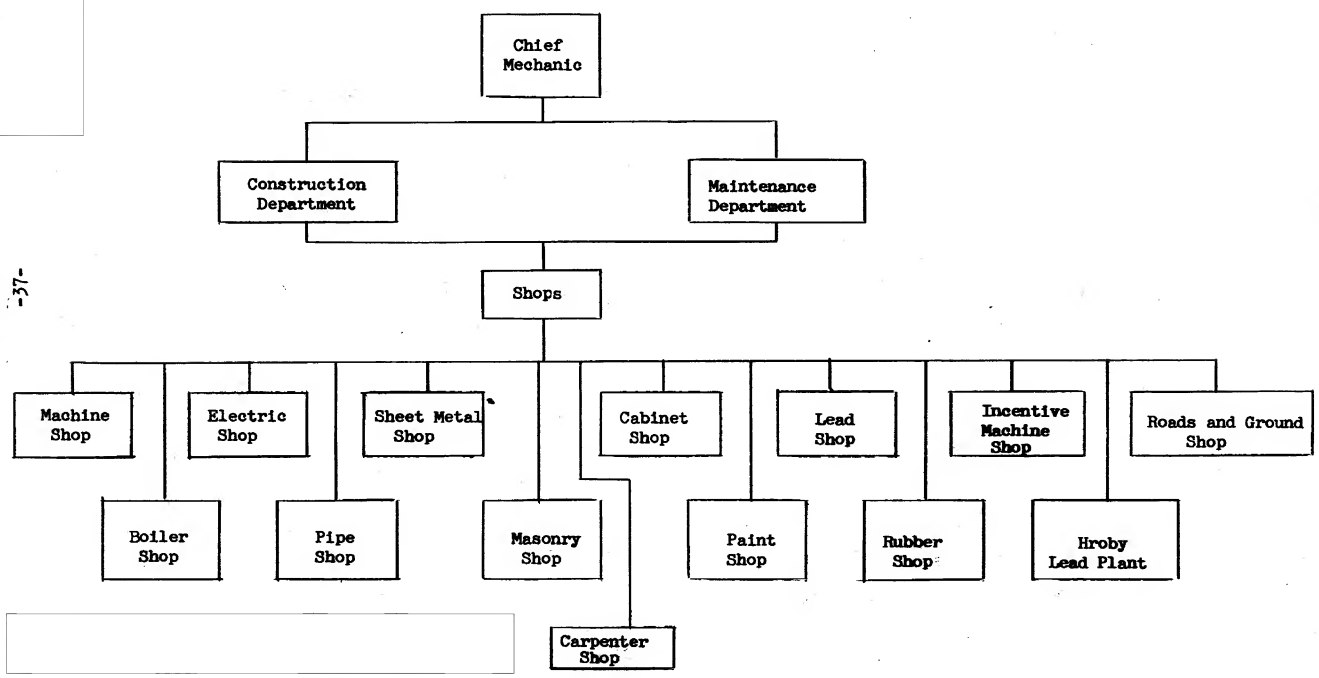
Annex E

CONSTRUCTION AND MAINTENANCE DEPARTMENT AT THE SPOLEK CHEMICAL COMBINE IN USTI NAD LABEM



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Annex F

POWER DEPARTMENT AT THE SPOLEK CHEMICAL COMBINE IN USTI NAD LABEM

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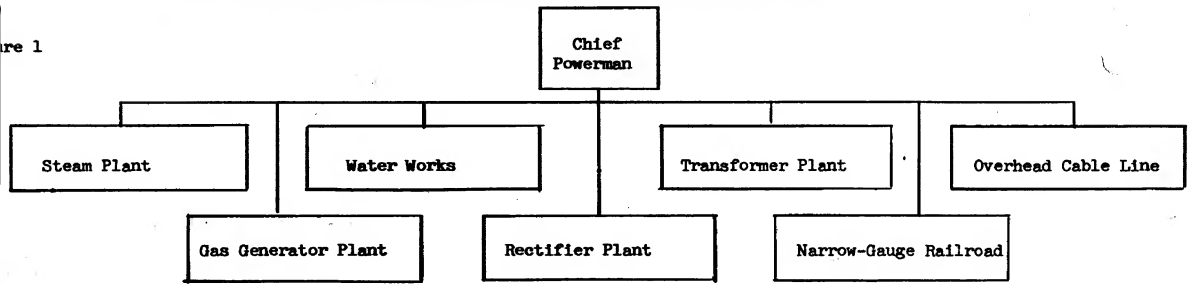
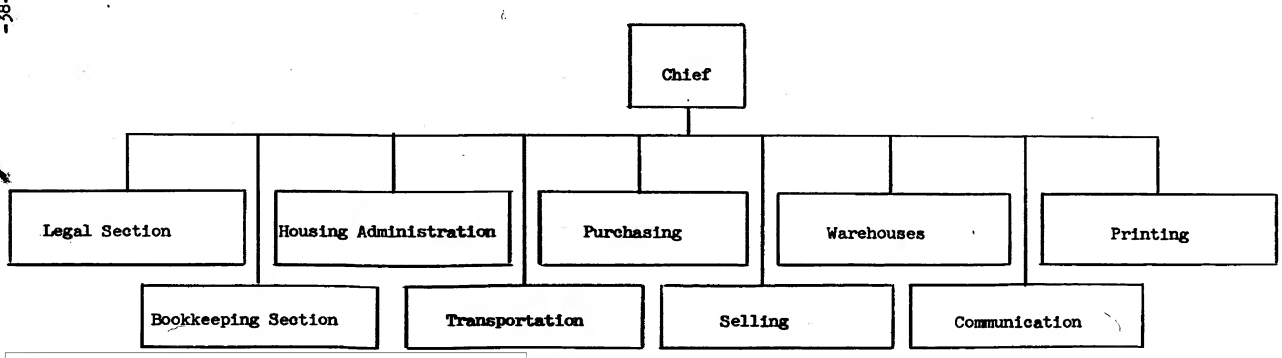


ADMINISTRATIVE DEPARTMENT AT THE SPOLEK CHEMICAL COMBINE, CZECHOSLOVAKIA



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Legend to Annex G

THE SPOLEK CHEMICAL COMBINE AT ÚSTÍ NAD LABEM, CZECHOSLOVAKIA (C)

1. Main Entrance: This entrance had a nearby guardhouse (a two-story brick building) and was open and guarded 24 hours a day. It was a combination pedestrian, vehicle, and railroad entrance. A time clock for keeping employees' working time was located in the guardhouse.

1a. Upper Entrance (Horní Vratnice): This was a pedestrian and vehicle entrance, which was guarded 24 hours a day. The guardhouse also contained a time clock for employees using this entrance.

1b. Side Entrance (Zadní Vratnice): This was a pedestrian entrance only and was open and guarded 24 hours a day. The guardhouse also contained a time clock.

1c. Railroad Gate: This gate was normally closed and locked. It was opened only when a train came from or went to the nearby city power plant. The key for the locked gate was retained at the power plant.

2. Research Institute for Inorganic Chemistry: This was a two-story brick building constructed in 1897. It had about 50 rooms, including the basement and attic.

The basement contained storage rooms, a photo shop, locker rooms, and a water distillation room. The first floor contained an experimental production test room, laboratories, offices, conference rooms, and two shower rooms. The second floor contained laboratories and offices. The attic was used as a storage room for old laboratory equipment and spare parts.

The only entrance to this building was through the administration building.

3. Administration Building: This was a ten-story, reinforced concrete and brick building with a flat roof. It was constructed in 1927. [redacted] the first floor contained offices, a waiting room, guard room, and a telephone central which was modernized in about 1954. 25X1

The director and chief engineer had offices on the third floor. The chief mechanic's offices were on the fourth floor, and the chief of the Administrative Department had offices on the fifth floor. The seventh floor contained offices of the chief powerman, while the entire ninth floor was loaned to Chemoprojekt, an institute for planning and drawing new chemical plants. It was subordinate to the Ministry of Chemical Industry and not part of the Spolek Chemical Combine. The tenth floor contained the technical library and the Spolek Chemical Combine archives.

4. Canteen: This was a one-story brick building with a wood and tar paper roof. It was one of the oldest buildings in the plant.

5. ROH Building: This two-story brick building contained offices and meeting halls of the plant ROH organization. In addition, it contained part of the technical library, glass-blowing shops, some offices of the plant Transportation Department, and the plant newspaper.

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[redacted]

[redacted] 25X1

6. Large Open Scales (used for weighing trucks).

7. Paint Shop: This was a very old, two-story, brick building with a tile roof.

8. Superphosphate Plant: This was a two-story brick building.

9. Superphosphate Warehouse: This was a one-story brick building with a wood and tar-paper roof. It was connected to the superphosphate plant by an overhead enclosed bridge. This building had been bombed during World War II and, with the exception of the eastern end, had been rebuilt in 1945. The superphosphates were stored in piles in this warehouse, where they were allowed to "ripen" for a few weeks.

10. Motorcycle and Bicycle Park: This was a one-story brick building.

11. Nitrogen Plant: This was a two-story brick building at least 40 years old. Before 1953 ammonia had been produced here, but since then nitrogen was its sole product.

12. Solvents Plant: This was a two-story brick building with a tile roof.

13. Warehouse: This one-story brick building with a wooden and tar-paper roof was used for storage of miscellaneous material.

14. Ammonia Storage Vats: There were a total of four open-topped vats used for storing concentrated ammonia.

15. Creosol Storage Tanks: These three metal tanks rested on cement foundations and each had a 15,000-liter capacity.

16. Butyl Alcohol Storage Tank: This storage tank had a capacity of 15,000 liters.

17. Masonry and Maintenance Shops: This brick one-story building was constructed about 1908.

18. Lead Shop: This was a brick one-story building.

19. Unidentified Building: A brick one-story building. Use unknown.

20. Unused Gas Storage Tanks: These tanks, each about 12 m high, were scheduled to be dismantled in 1958.

21. Unused Building: This one-story brick building was also scheduled to be dismantled in 1958.

22. Cryolite Plant: This reinforced concrete two-story building was constructed during the years 1952 and 1953. In 1956, the roof caved in from heavy snows and winds and was not repaired until 1958.

23. Cryolite Building: This two-story reinforced-concrete building, constructed in 1952 and 1953, was the plant where cryolite was actually produced.

25X1

24. Warehouse: This open-sided building was used for temporary storage of new machinery and equipment.

25. Unidentified Building: The present use of this three-story brick building was unknown to Source. Stannic chloride ($Sn\ Cl_4$) was produced here until about 1935.

26. Carbon Bisulfide Laboratories and Offices: This was a brick two-story building.

27. Carbon Bisulfide Plant: This brick two-story building was constructed about 1940. It had the highest smokestack in the factory, and the equipment was modern and up-to-date.

28. Sulfur Melting Building: This one-story brick building was part of the carbon bisulfide plant. It was constructed about 1940.

29. Carbon Bisulfide Distillation Building: This brick two-story building was also constructed about 1940.

30. "Claus Oven". The waste products of the carbon bisulfide distillation process were burned in this oven to produce raw sulfur. It was a brick one-story building constructed about 1940.

31. Carbon Bisulfide Storage Tanks: These two underground storage tanks each had a capacity of about 15 tons.

32. Gas Generator Plant: This was a one-story brick-concrete building about 12 m high. It had approximately 8 to 10 ovens and operated 24 hours a day.

33. Alizarin Plant: This was a two-story brick-concrete building which had been reconstructed and modernized after a fire in 1949. It contained filter presses and vats for the production of alizarin.

34. Alizarin Plant Dressing Rooms and Shops: This was an old, one-story brick building with a tar paper roof.

35. Beta-Amino Anthraquinone Plant: This was a brick two-story building which had been constructed about 1930.

36. Ostanthrene Blue Plant: This was a two-story brick building constructed about 1930.

37. Ostanthrene Blue Chlorination Plant: This brick-concrete two-story building was constructed several years ago (exact date of construction unknown).

38. Water Tower: This water tower was approximately 50 years old, of circular construction, made of bricks and was partly undergound. It extended about 6 m above the ground.

39. Trichloroethylene Plant: This brick-concrete three-story building was constructed about 1940. It was enlarged in 1957 in order to double its production capacity.

25X1

40. Trichloroethylene Chlorination and Absorbtion Towers: These were three iron towers covered with wooden roofs. They were each about 12 m high and were constructed about 1941 or 1942.

41. Trichloroethylene Storage Building: This one-story brick building was constructed about 1941 or 1942.

42. Trichloroethylene Plant Offices, Laboratories, and Dressing Rooms: This was a two-story brick building constructed about 1941 or 1942.

43. Water Tower: This old water tower was partially underground. It was about 15 m high, of circular shape, and constructed of brick.

44. Warehouse for Ceramic and Glass Vessels: This was a one-story brick building with a tar-paper roof.

45. Warehouse for Ceramic and Glass Vessels: This building was the same construction and of the same use as item 44.

46. Xanthate Plant: This brick two-story building was the former Trichloroethylene Plant but had been converted to xanthate production in 1951.

47. Ammonium Chloride Plant: This was a brick two-story building with a new roof. It was the only ammonium chloride plant in Czechoslovakia.

48. Hydrochloric Acid Plant: This was a brick two-story building.

49. Unused Plant: This three-story brick building was the former sodium sulfate plant. Production of sodium sulfate was discontinued in 1958 and the plant was being dismantled. Its future use was unknown.

50. Epichlorohydrin Plant: This was a three-story brick building, which was constructed about 1955 or 1956.

51. Dye Mixing Plant: This was a reinforced concrete six-story building. It had been constructed in about 1935, but in 1958 two new stories were added. [redacted] an air raid shelter and an emergency telephone central were located in the basement. 25X1

52. Boiler Shop (Kotlarna): This was a 50-year-old two-story brick building. The piping (potrubarna) shop was also located in this building.

53. Machine Shops: This was a one-story brick building with a very high ceiling.

54. Technical Control Building: This was a three-story brick building. The largest portion of the building space contained chemical laboratories, but the Gauges and Meters Section had some rooms on the first floor of this building.

55. Plant Kitchen: This was a brick two-story building about 50 years old. In addition to the plant kitchen, the eastern part of the building had a package receiving office.

25X1

56. Sign Shop: This two-story brick building contained shops for painting signs and posters.

57. Plant Dispensary: This former villa was a two-story brick building about 60 years old. It contained all equipment and material for the efficient operation of a large dispensary.

58. Electrical Goods Warehouse: This was an old wood and brick two-story building with a tar-paper roof.

59. Cabinet Shop: This was a two-story brick building.

60. Incentive Machine Shop: This was a one-story brick building.

61. Carpenter Shop: This was a thin brick-walled one-story building with a tar-paper roof.

62. Warehouse: The type of material or equipment stored in this thin-walled, one-story brick building was unknown.

63. Gauges and Meters Shop: This was a two-story brick building. In addition to containing the gauges and meters shop, it had a laboratory in the eastern part of the ground floor and dressing rooms in the basement.

64. Synthetic Precious Stones Plant: This was an old, two-story brick building with a tile roof. This building also contained a pilot plant for the Inorganic Chemistry Research Institute and a tool and instrument supply room.

65. Electric Work Shops: This two-story brick building was constructed around 1900.

66. Transformer Station: This was a one-story brick building about 50 years old.

67. Hydrogen Gas Storage Tank: This metal, telescope-type tank reached a maximum height of 15 m when the tank was full.

68. Azo Dyestuffs Plant: This reinforced concrete six-story building was constructed about 1936.

69. Dye Intermediates Plant: This was a four-or-five story brick building constructed in about 1936. An American-built ice plant was also in this building. These "flake ice" machines were installed in 1936 or 1937 by an unrecalled American firm.

70. Tar Dye Section Maintenance Shops: This two-story brick building was about 40 years old. It was the former nitric acid plant, but production of this acid was stopped in about 1954. In addition to maintenance shops, the building contained a pilot plant for ion exchangers, the plant laundry, and a chemical warehouse. It was rumored that the laundry was to be moved to the Velvety plant during the latter part of 1958.

71. Sheet Metal Shop: This was a two-story brick building.

25X1

72. Unused Building: The northern end of this brick building was one-storied and the south end was two-storied. It was formerly used for the production of benzoic acid, but production of this acid was halted in 1957.

73. Hydroxynaphthoic Acid Plant: The northern end of this brick building was one-story and the southern end was two-story. In 1954 the building was modernized and new equipment was installed.

74. Beta-Naphthol Plant: This two-story brick building was constructed about 1943.

75. Dian Plant: The northern end of this three-story brick building was used as the dian plant and the southern end contained offices for the beta-naphthol plant. During World War II, the building was bombed; it had been rebuilt after the war.

76. Chemical Storage Tanks: Acetone, linseed oil and toluene were some of the chemicals known to Source which were stored in these iron and aluminum tanks. There were 4 or 5 tanks, each with a 15,000-liter capacity.

77. Synthetic Resins Plant: This was a four-story reinforced concrete building. Construction of this building was begun in 1938 but was not completed until 1945.

78. Organic Laboratories: This three-story concrete building was constructed in about 1937.

79. Sulfur Dye Drying Building: The northern end of this concrete and brick building had two stories and the southern end had one story.

80. Sulfur Dyestuff Plant: This three-story concrete and brick building was constructed in 1936.

81. Sulfur Dyestuff Warehouse: This was a one-story brick building with a wood and tar-paper roof.

82. Open Water Storage Basin

83. Open Brown Coal Storage Area

84. Sulphite Plant: This was a two-story brick building with a wood and tar-paper roof. It was constructed in about 1918.

85. Soluble Amines Plant: This two-story brick building was constructed in about 1918.

86. Ultrazoles Plant: This was a three-story brick building constructed about 1908 but rebuilt and renovated in 1947.

87. Ultrazoles Drying Room: This one-story brick building was constructed about 1947.

88. Barium Chloride and Solid Calcium Chloride Plant: This was a brick one-story building about 12 m high. The western end of this building was not used because of its age.

25X1

89. Sodium Fluoride, Ammonium Fluoride and Barium Sulfate Plant: This brick two-story building was about 40 years old. A new roof had been placed on the building in 1953. This plant had produced hydrofluoric acid until the completion of the cryolite plant. [redacted] sodium fluorosilicate may have also been produced here. 25X1

90. Tungstic Acid Plant: This two-story brick building was about 40 years old. Calcium molybdate, freon gas, and magnesium ammonium sulfate were also produced in this building.

91. Abandoned Buildings: There were two or three one-story brick buildings with tar-paper roofs located here.

92. Storage Area: Construction material such as lumber, bricks and concrete were stored in this area.

93. Brown Coal Storage Area

94. Offices, Laboratories and Dressing Rooms of the Sulfuric Acid Plant: This was a two-story brick building with a flat roof, constructed in 1936.

95. Pyrites Furnaces: This was a three-story brick building about 25 m high and open on the east side. Pyrites were burned in the furnaces for the manufacture of sulfuric acid.

96. Storage Area: This was a storage area for pyrites. Pyrites were delivered to the furnaces (item 95) by means of a large overhead crane. This same crane was used to transport the waste materials from the furnaces to nearby railroad cars.

97. Unidentified Building: A brick two-story building.

98. Sulfuric Acid Plant: This was a two-story brick building. It was much higher than a normal two-story building. It was in this plant that the oxidation of sulfur dioxide, the manufacture of chlorosulfonic acid, the production of oleum, and the manufacture of various grades of sulfuric acid took place.

99. Oleum Building: This two-story brick building was part of the sulfuric acid plant. [redacted] outside were coolers and absorbing towers used in the preparation of oleum. 25X1

100. Warehouse: This two-story brick building was used for storing the waste sulfuric acid. This waste was later used for the production of superphosphate. The waste was stored in large iron tanks.

101. Rock Salt Storage Warehouse: This one-story brick building contained rock salt used for electrolysis and dye mixing.

102. Office Building: This two-story brick and wooden building contained offices and dressing rooms for the employees of the chlorine and bleach plants.

103. Bleach Powder Plant: This was a two-story brick building. In this plant, the Spolek Chemical Combine produced powdered bleach, liquid bleach and sodium hypochlorite.

104. Warehouse: This three-story brick building was used for the storage of clothing, lubricants, filter cloths, and rubber tires. Nothing made of metal was stored here.

25X1

105. Steam Plant: This was a two-story brick building.

106. Transformer Building: In addition to containing the plant's transformers, this two-story brick building contained the plant's air compressors and a water purification and demineralization department. The ÚSTÍ NAD LABEM plant had an inter-factory compressed air line.

107. Water Cooling Towers: There were an unrecalled number of wooden towers about 15 m high. These towers were used for cooling the hot water from 25X1 the steam plant. After the water was cooled, it was re-used.

108. Liquid Chlorine Plant: This was a two-story brick and concrete building which had been renovated in about 1933. huge quantities of liquid chlorine were stored here. The Ministry of National Defense attempted to force the Spolek Chemical Combine to have underground storage facilities constructed for the chlorine

109. Chlorine Gas Plant: This was a two-story brick building which was con- 25X1 structed in about 1933.

110. DDT Plant: This was a two-story brick building which had been renovated and modernized in 1947.

111. Water Tank: This was a concrete structure. Most of the tank had been constructed underground. The circular-shaped tank extended about 12 m above ground.

112. Rock Salt Warehouse: This was a one-story brick building with a tar-paper roof.

113. Ruins: These were the ruins of an electrolysis plant; only part of the walls remained standing. This was the first electrolysis plant at ÚSTÍ NAD LABEM.

114. Inorganic Experimental Laboratories Building: This was a one-story brick building.

115. Ruins: These ruins were also part of the first electrolysis plant at ÚSTÍ NAD LABEM.

116. Warehouse: This was a brick two-story building. It was used for the same purpose as the building listed as item 24.

117. Octadecylamine Plant: Construction of this plant began in April or May 1958 25X1

118. Solid Caustic Soda Plant: In addition to solid caustic soda, sodium hydroxide, and potassium hydroxide were also produced in this brick two-story building.

119. Unidentified Building: This was a brick two-story structure.

120. Magnesium and Zinc Chloride Plant: This was a brick two-story building with a tar-paper roof.

[redacted] 25X1

121. Electrolysis Plant: This one-story brick building was the older of two electrolysis plants in the USTI NAD LABEM factory. Liquid caustic soda was produced here.

122. Electric Power Converter Station: This was a one-story brick building.

123. Salt Brine Building: This was a one-story brick and concrete building.

124. Liquid Calcium Chloride Plant: This was a one-story brick building.

125. Repair Shops: This one-story brick building contained repair shops for the electrolysis section.

126. Potash Plant: This was a two-story brick building.

127. Mercury Distillation Building: This was a one-story brick structure.

128. Permanganate Plant: This two-story brick building with a tar-paper roof was constructed in 1895.

129. Artificial Manganese Dioxide Plant: This was a one-story brick building constructed about 1910.

130. Warehouse for Toxic and Inflammable Chemicals: This one-story brick building was the former aniline dye plant. Production of this dye was stopped in 1946.

131. Unidentified Building: This was a brick one-story structure.

132. Shipping and Receiving Department: This department consisted of two small one-story wooden buildings. Only small items were shipped from and received by this department.

133. Dinitrobenzene Granulation Station: There was no building in this area. It contained outside equipment for granulation of dinitrobenzene.

134. Unidentified Building: This was a brick one-story structure.

135. Plant Fire Station and Guard House: This brick two-story building was utilized jointly by the plant firemen and the plant civilian guards.

136. Garage: This brick two-story building was used as a garage for fire trucks.

137. Warehouse: This was a two-story brick building used by the Shipping Department as temporary storage for items due to be shipped out.

138. Warehouse: This two-story brick building was used for the same purpose as the building listed as item 137. 25X1

139. "Culture House": This one-story brick building was constructed about 1948 and was used for ROH meetings and for conferences. It was occasionally used by outside concerns for meetings and conferences.

140. Emergency Water Storage Basin: [redacted]

25X1

25X1

141. Anthraquinone Plant: This was a two-story brick building constructed about 1930.

142. Office and Laboratory Building: This brick two-story building contained offices and laboratories for the electrolysis section.

143. Rubber Shop: This was a brick two-story building.

144. New Electrolysis Plant: This was a one-story brick building constructed about 1936.

145. New Converter Building: This two-story brick structure was constructed about 1936.

146. Drum and Cask Building: Drums and casks were stored and cleaned in this two-story brick building.

147. Inorganic Laboratories Pilot Plant: This was a brick one-story building. In 1958 a new inorganic laboratory was added to this building.

148. Idle Building: This brick one-story building contained unused equipment for the production of caustic soda.

149. Idle Converter Building: This brick one-story building still contained old converter equipment, but it was not being used and had fallen into a state of decay.

150. Inorganic Research Laboratories: This was a one-story brick building.

151. Dye Powdering and Pasting Building: This was a two-story brick building. Here, dyes were ground into microscopic particles or made into pastes for printing purposes.

152. Dye Paste Building: This brick one-story building had been a former varnish preparation plant but was now making fine pastes.

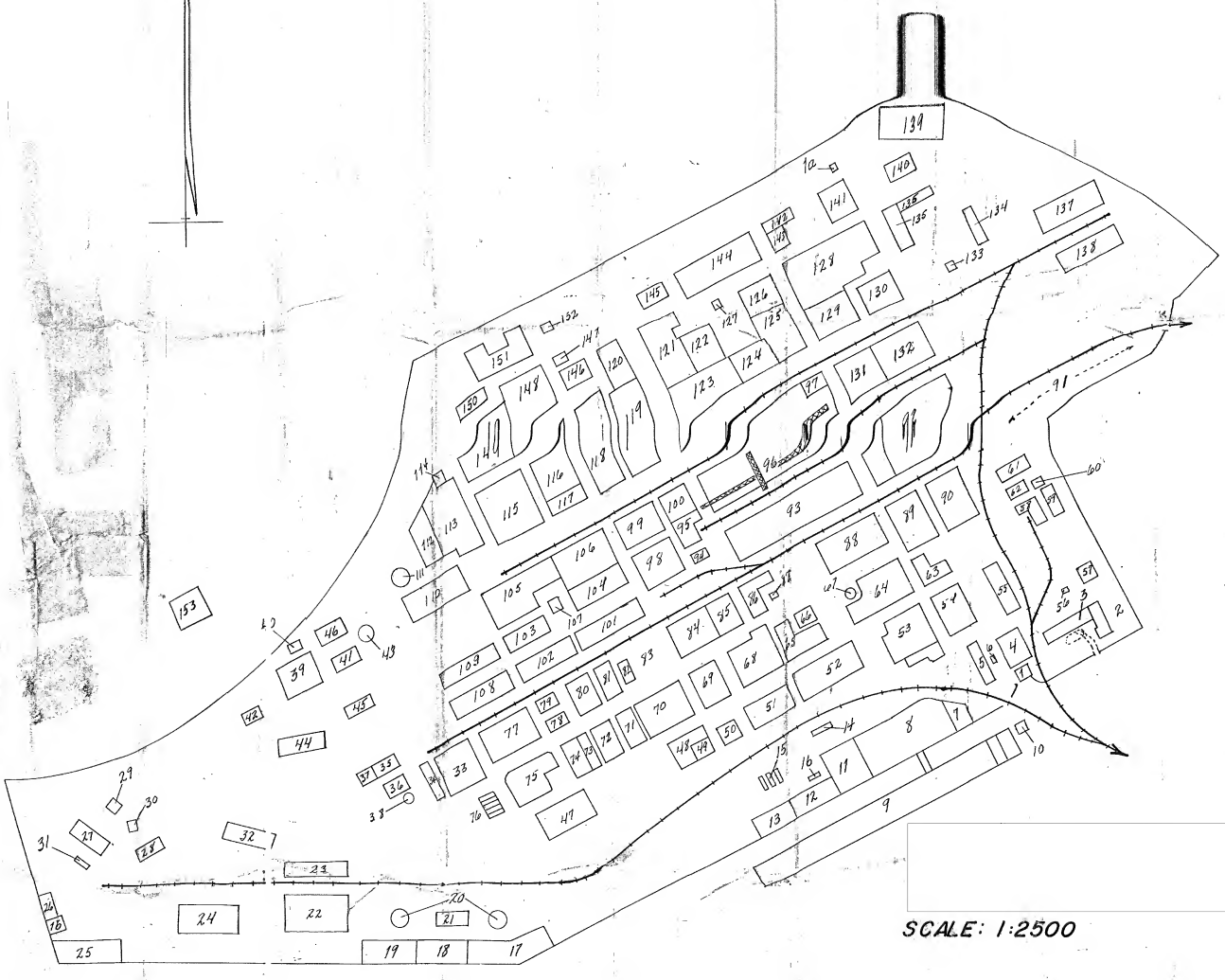
153. New Water Tank: [redacted] not know the capacity of this concrete water tank. It was constructed about 1952 and extended about 5 m. aboveground, with the majority of its mass being underground.

25X1

25X1

SKETCH OF THE SPOLEK CHEMICAL COMBINE AT USTI NAD LABEM, CZECHOSLOVAKIA

25X1



25X1

SCALE: 1:2500